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L3: Entry 3 of 10

File: JPAB

Jan 28, 2000

PUB-NO: JP02000031397A

DOCUMENT-IDENTIFIER: JP 2000031397 A

TITLE: SEMICONDUCTOR DEVICE

PUBN-DATE: January 28, 2000

INVENTOR - INFORMATION:

NAME

COUNTRY

NOGUCHI, MITSUHIRO TAKASHIMA, DAIZABURO SEKIMURA, MASAYUKI

ASSIGNEE-INFORMATION:

NAME

COUNTRY

TOSHIBA CORP

APPL-NO: JP10196112 APPL-DATE: July 10, 1998

INT-CL (IPC): HO1 L 27/10; HO1 H 59/00

#### ABSTRACT:

PROBLEM TO BE SOLVED: To sufficiently lower resistance of a movable thin film part in an MEMS element, reduce irregularity of the resistance, improve reliability of wiring using the MEMS element, and facilitate integration with a semiconductor integrated circuit.

SOLUTION: A semiconductor device using an MEMS element is provided with a conducting region (lower electrode) 9 formed on the main surface of an Si substrate 7, a conducting film (intermediate electrode) 8 separately counter pased to the lower electrode 9, both end portions of which film are fixed on the substrate 7 via an insulating film 6, and central part of which film is capable of displacement, an insulating film 10 buried and formed in a hole which is formed in the conducting film 8 and penetrates it in the direction vertical to the substrate main surface, and a conducing film (upper electrode) 1 which is fixed on the substrate 7 via an insulating film 2 and counter posed on the side opposite to the lower electrode 9 with respect to the intermediate electrode 8. The distances between a displacement part of the intermediate electrode 8 and the lower electrode 9 and the upper electrode 1.

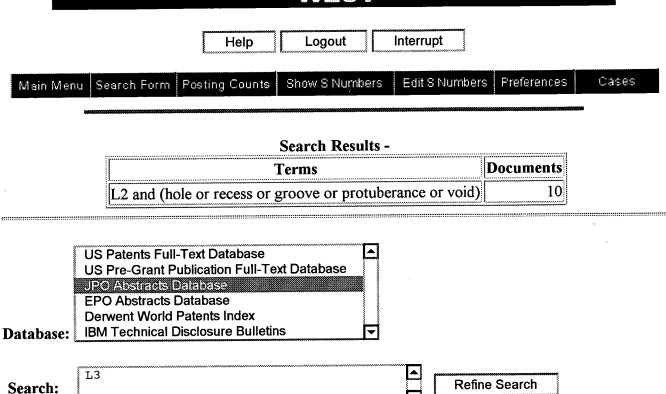
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L	Hits	Search Text	DB	Time stamp
Number				
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			EPO; JPO;	
	•		DERWENT;	
			IBM TDB	
2	1857	(((micro adj electro adj mechanical adj	USPAT;	2003/04/25
		system) or mems)) and ((passivation or	US-PGPUB;	08:54
		dielectric or insulat\$3) adj (layer or	EPO; JPO;	
		film))	DERWENT;	
		,	IBM TDB	
3	1126	((((micro ad; electro ad; mechanical	USPAT;	2003/04/25
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		or dielectric or insulat\$3) adj (layer	EPO; JPO;	
		or film))) and (hole or recess or	DERWENT;	
	1	groove or protuberance or void)	IBM TDB	
4	152	1 -	USPAT;	2003/04/25
-	132	adj system) or mems)) and ((passivation	US-PGPUB;	08:57
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		or dielectric or insulat\$3) adj (layer	EPO; JPO;	
		or film))) and (hole or recess or	DERWENT;	
		groove or protuberance or void)) and	IBM_TDB	
	L	stiction		

1. July 1





#### **Search History**

Clear

DATE: Friday, April 25, 2003 Printable Copy Create Case

Recall Text 4

Set Nam side by sid	Hit Count	Set Name result set	
DB=J	PAB; PLUR=YES; OP=ADJ		
<u>L3</u>	L2 and (hole or recess or groove or protuberance or void)	10	<u>L3</u>
<u>L2</u>	L1 and (passivation or dielectric or insulat\$3)	42	<u>L2</u>
<u>L1</u>	((micro adj electro adj mechanical adj system) or (micro adj electromechanical) or mems)	1753	<u>L1</u>

END OF SEARCH HISTORY